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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,489	06/09/2005	Murray Figov	91255MGB	7114

1333 7590 09/20/2006

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EXAMINER

ZIMMERMAN, JOSHUA D

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 09/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/538,489	Applicant(s) FIGOV, MURRAY	
	Examiner Joshua D. Zimmerman	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 40-70 is/are pending in the application.
- 4a) Of the above claim(s) 62-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 40-61, 69 and 70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Formal Matters

1. Due to a clerical error, the pre-examination amendment to the claims dated 06/09/2005 were incorrectly recorded and resulted in the previous actions by the Office referencing cancelled claims. This action is meant to remedy the errors. As such, the period for reply has been reset from the mailing date of this action.

Election/Restrictions

2. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 39-61 and 69-70, drawn to a lithographic printing blank, a method of producing said blank, and a wet lithographic printing process using said blank.

Group II, claim(s) 62-68, drawn to an ink jet ink.

3. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the technical feature of group I, a lithographic printing plate coating comprising: polyvinyl alcohol, polyacrylic acid, a hydrophobic water-based emulsion with pH of 7 or below, an aminoplast, and at least one wetting agent is different from the technical feature of group II, an ink jet ink with a switchable material.

4. Applicant's election of Group I in the reply filed on 06/26/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made FINAL.

5. Claims 62-68 are therefore withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. Claims 54 and 60-61 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 54, applicant does not describe in the specification a method wherein the coating comprising the elements claimed in claim 54 is made hydrophobic.

The coating as claimed, and described in the specification, results only in a hydrophilic surface, which only allows the imaging accomplished by the ink jet ink to switch the properties of the blank from hydrophilic to oleophilic. Thus, one having ordinary skill in the art would not know how to make a hydrophobic coating comprising those elements claimed in claim 54. Accordingly, only the case where the hydrophilic substrate is switched to hydrophobic is examined on the merits in this action.

Regarding claims 60-61, applicant does not describe in the specification a method as claimed in claim 54, wherein the ink-jet ink contains a water soluble ingredient which *switches* the *coating* from being oleophilic to hydrophilic. The only case supported by the specification is the case where a hydrophobic *substrate* is imaged with the hydrophilic coating by inkjet means. No *switching*, as defined by applicant, occurs. Thus, one having ordinary skill in the art would not know how to carry out the method as claimed in claims 60-61.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 56 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The second limitation of claim 56 requires that a hydrophilic image be created by the application of an aqueous ink via inkjet. However, claim 54, from which 56 depends, provides a coating which is only hydrophilic (see above discussion of claim 54 in regards to the 112, first paragraph, rejection). It is unclear how

an image can be created when there is no switching of hydrophilicity, as required by the last limitation of claim 54. As such, claim 56 could not be examined on the merits.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 40, 41, 43-47 and 49-53 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukino et al. (EP 1 057 622 A2).

Regarding claim 40, Fukino et al. disclose “a lithographic printing blank comprising a coating deposited from aqueous fluid onto a substrate (abstract), the coating comprising:

polyvinyl alcohol (paragraph 165, paragraph 246);

polyacrylic acid (paragraph 165, paragraph 246);

hydrophobic water-based emulsion with pH of 7 or below (paragraph 267);

aminoplast (paragraph 247); and

at least one wetting agent (paragraph 267).”

Regarding claim 41, Fukino et al. further disclose “wherein the coating is hydrophilic (abstract).”

Regarding claim 43, Fukino et al. further disclose “wherein the aminoplast is a urea-formaldehyde resin (paragraph 247).”

Regarding claim 44, Fukino et al. further disclose "wherein the hydrophobic water-based emulsion has one of a phenol formaldehyde (paragraph 266) and an acrylic polymer or copolymer as its internal phase (paragraph 268)."

Regarding claim 45, Fukino et al. further disclose "wherein the coating has a dry coating weight between 1 gram per square meter and 4 grams per square meter (paragraph 284)."

Regarding claim 46, Fukino et al. further disclose "wherein the polyacrylic acid is present at between 20% and 60% of the dry coating weight (paragraph 165)."

Regarding claim 47, Fukino et al. further disclose "wherein the polyvinyl alcohol is present at between 1% and 15% of the dry coating weight (paragraph 165)."

Regarding claim 49, Fukino et al. further disclose "wherein the wetting agent comprises silicone surfactant (paragraph 319)."

Regarding claim 50, Fukino et al. further disclose "wherein the at least one wetting agent is present at between 0.5% and 7% of the dry coating weight (paragraph 277)."

Regarding claim 51, Fukino et al. further disclose "wherein the aminoplast is present at not more than 10% of the dry coating weight (paragraph 269)."

Regarding claim 52, Fukino et al. further disclose "wherein the aminoplast is present at between 10% and 20% of the dry coating weight (paragraph 269)."

Regarding claim 53, Fukino et al. further disclose "wherein the substrate comprises one of untreated aluminum (paragraph 288), aluminum treated with phosphoric acid (paragraph 299), and anodized aluminum (paragraph 292)."

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukino et al.

Regarding claim 48, Fukino et al. teach all that is claimed, but fail to disclose "wherein the hydrophobic water-based emulsion is present at between 25% and 55% of the dry coating weight." However, Fukino et al. teach a range of concentrations in paragraph 269, and further teach that the emulsions are added to control the degree of hydrophilicity of the coating (paragraph 266). Further, Fukino et al. teaches ranges of concentrations for all of the components in the layer (see, e.g., paragraphs 272, 165, 270), suggesting that varying the concentrations of the various components is not only feasible, but encouraged. Therefore, it would have been obvious to one having ordinary skill in the art, through routine experimentation, to choose a concentration of hydrophobic water-based emulsion between 25% and 55% of the dry coating weight in order to optimize the hydrophilicity.

6. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukino et al. as applied to claim 40 above, in view of Hallman et al. (US 5,820,932).

Regarding claim 42, Fukino et al. teach all that is claimed, but fail to teach that “the coating is oleophilic.” However, Hallman et al. teach the desire and ability to reverse the hydrophilicity of the printing plate coating (column 4, lines 45-54). It would have been obvious to one of ordinary skill in the art at the time of the invention to change the hydrophilicity of the coating in order to meet the needs of the print job, such as when water-based ink is desired to be printed.

7. Claims 54-56, and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukino et al. in view of Kawamura (US 2001/0019760) and Touhsaent (US 6,444,750).

Regarding claim 54, Fukino et al. teach “a method of preparing a lithographic printing plate (title), comprising the steps of:

providing a printing blank comprising a coating deposited from aqueous fluid onto a substrate, the coating comprising:

polyvinyl alcohol (paragraphs 165 and 246);

polyacrylic acid (paragraphs 165 and 246);

hydrophobic water-based emulsion with pH of 7 or below (paragraph 267);

aminoplast (paragraph 247); and

at least one wetting agent (paragraph 267).”

Fukino et al. lack the “depositing aqueous ink-jet ink onto said coating in the form of an image, whereby the imaged areas of said coating acquire oleophilic or hydrophilic

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properties which are opposite to the oleophilic or hydrophilic properties of said printing blank.”

Kawamura teaches a method of forming an imaged printing plate wherein the hydrophilic surface is switched to hydrophobic by application of a catalyst via inkjet (paragraphs 83 and 84). The plate produced by the method of Kawamura doesn't undergo development, thus saving time in the printing process.

Further, Touhsaent teaches a method of making a polyvinyl alcohol coating hydrophobic by crosslinking with urea formaldehyde in the presence of an acid catalyst (column 1, lines 15-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply an acid catalyst via inkjet to the printing plate and coating of Fukino et al. in order to make the coating hydrophobic in the imaged areas, as taught by Touhsaent, in order to make a printing plate that does not require development, as taught by Kawamura, in order to save time in the printing process.

Regarding claim 55, Touhsaent further teaches heating in order to further crosslink the coating (column 5, lines 5-8).

Regarding claim 56, Touhsaent further teaches that the surface becomes hydrophobic, thus making a hydrophobic image when the acid catalyst is applied to the surface (column 1, lines 15-25).

Regarding claim 59, Touhsaent and Kawamura teach “wherein the ink-jet ink contains a water-soluble ingredient (the acid catalyst is water-soluble) which switches the coating from being hydrophilic to oleophilic (column 1, lines 15-25 of Touhsaent).”

Claims 57-58 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukino et al. in view of Kawamura (US 2001/0019760) and Touhsaent (US 6,444,750), as applied to claim 54 above, further in view of Deutsch et al. (US 2002/0054981) and Tashiro et al. (US 5,556,583).

Regarding claim 57, Fukino et al., Kawamura and Touhsaent fail to teach "wherein the ink-jet ink contains a microencapsulated pigment." However, Deutsch et al. teach the addition of an indicator into the ink in order that the imaged area can be identified (paragraph 37).

Tashiro et al. teach the encapsulation of ink jet pigments in order to create a more durable image (column 2, lines 17-25).

Therefore, it would have been obvious to one having ordinary skill in the art to incorporate encapsulated pigments in the inkjet ink in order to be able to identify the imaged areas, as taught by Deutsch et al., and so that the imaged areas are durable, as taught by Tashiro et al.

Regarding claim 58, the encapsulated pigment contains in its capsule a polymer binder.

8. Claim 69 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukino et al. in view of Kawamura (US 2001/0019760) and Touhsaent (US 6,444,750).

Fukino et al. teach a method of preparing a lithographic printing plate (title), comprising the steps of:

“providing a printing blank comprising a coating deposited from aqueous fluid onto a substrate, the coating comprising:

polyvinyl alcohol (paragraphs 165 and 246);

polyacrylic acid (paragraphs 165 and 246);

hydrophobic water-based emulsion with pH of 7 or below (paragraph 267);

aminoplast (paragraph 247); and

at least one wetting agent (paragraph 267).”

Fukino et al. lack the “depositing aqueous ink-jet ink onto said coating in the form of an image, whereby the imaged areas of said coating acquire oleophilic or hydrophilic properties which are opposite to the oleophilic or hydrophilic properties of said printing blank.”

Kawamura teaches a method of forming an imaged printing plate wherein the hydrophilic surface is switched to hydrophobic by application of a catalyst via inkjet (paragraphs 83 and 84). The plate is then used “in a wet-lithographic printing press to produce printed impressions (paragraph 84).” The plate produced by the method of Kawamura doesn’t undergo development, thus saving time in the printing process.

Further, Touhsaent teaches a method of making a polyvinyl alcohol coating hydrophobic by crosslinking with urea formaldehyde in the presence of an acid catalyst (column 1, lines 15-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to apply an acid catalyst via inkjet to the printing plate and coating of Fukino et al. in order to make the coating hydrophobic in the imaged areas, as taught

by Touhsaent, in order to make a printing plate used in a wet-lithographic printing press that does not require development, as taught by Kawamura, in order to save time in the printing process.

Claim 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fukino et al. in view of Kawamura (US 2001/0019760) and Touhsaent (US 6,444,750), as applied to claim 69 above, further in view of applicant's admitted prior art (AAPA).

Regarding claim 70, AAPA teaches using a switchable polymer on a plate substrate that is a plate cylinder that is reused after a printing run (page 10, lines 6-11 of applicant's specification). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a plate cylinder as a substrate for the coating in order to save money by reusing the substrate.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua D. Zimmerman whose telephone number is 571-272-2749. The examiner can normally be reached on M-R 8:30A - 6:00P, Alternate Fridays 8:30A-5:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joshua D Zimmerman
Examiner
Art Unit 2854

jdz


JUDY NGUYEN
SUPERVISORY PATENT EXAMINER